

# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/GB2004/003324

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 A61B5/0428

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A61B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 850 370 A (DOWER GORDON E) 25 July 1989 (1989-07-25) cited in the application	30, 42-49
A	column 3, line 54 - column 4, line 18 figures 1, 4	1, 6, 34
X	US 5 058 598 A (NICKLAS JOHN M ET AL) 22 October 1991 (1991-10-22) cited in the application	30-33, 42-49
A	column 2, line 67 - column 3, line 20 column 3, line 47 - column 4, line 4 ----- -/--	1, 6, 34

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

### \* Special categories of cited documents :

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*Z\* document member of the same patent family

Date of the actual completion of the international search

20 January 2005

Date of mailing of the international search report

02 02 2005

Name and mailing address of the ISA

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2002/035334 A1 (MEIJ SIMON H ET AL) 21 March 2002 (2002-03-21)	40,42-49
Y		41
A	paragraphs '0058! - '0063! figures 3-6	22,24
Y	EP 0 845 240 A (PACESETTER AB) 3 June 1998 (1998-06-03)	41
A	column 5, line 2 - column 7, line 6	23
A	US 2002/045837 A1 (KOJIMA TAKESHI ET AL) 18 April 2002 (2002-04-18)	1,6,30, 34,42, 46,49
	paragraphs '0009! - '0012! figure 6	
A	EP 1 221 299 A (GE MED SYS INFORMATION TECH) 10 July 2002 (2002-07-10)	1,6,30, 34,42, 46,49
	paragraphs '0011!, '0012! paragraphs '0029! - '0034! figures 4,5	
P,A	WO 03/099115 A (SCHRECK DAVID M) 4 December 2003 (2003-12-04)	1,6,30, 34,42, 46,49
	page 1, lines 5-13 page 4, lines 16-33 figure 1	

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Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 4850370	A	25-07-1989	NONE	
US 5058598	A	22-10-1991	CA 2067225 A1 EP 0495081 A1 WO 9202171 A1	04-02-1992 22-07-1992 20-02-1992
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## Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this International application, as follows:

see additional sheet

1. ☒ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

### Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☒ No protest accompanied the payment of additional search fees.

**FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210**

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-39, 42-49 (part)

Method and apparatus for synthesising ecg signals from a first set of ecg signals comprising at least three electrode locations.

1.1. claims: 1-29,42-49 (part)

Method and apparatus for synthesising ecg signals from a first set of ecg signals comprising a signal acquired from an electrode placed on the right anterior auxiliary line level with V5.

1.2. claims: 30-33,42-49 (part)

Method and apparatus for synthesising ecg signals from a first set of ecg signals comprising a signal acquired from an electrode placed on the sternum and at RC or RA and LC or LA.

1.3. claims: 34-39,42-49 (part)

Method and apparatus for synthesising ecg signals from a first set of ecg signals comprising a signal acquired from an electrode placed on the sternum, at V4 or V5 or V6, and on the right body side level with V4 or V5 or V6.

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2. claims: 40,41,42-49 (part)

Method and apparatus for synthesising ecg signals from a first set of ecg signals comprising detection of body posture.

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